

50. **(New)** The isolated nucleic acid of claims 27-32, 36-38 or 42-46 operably linked to a transcriptional control sequence.
51. **(New)** A vector comprising the nucleic acid of claims 27-32, 36-38 or 42-46.
52. **(New)** A cell comprising the nucleic acid of claims 27-32, 36-38 or 42-46.
53. **(New)** A method for producing a polypeptide encoded by the nucleic acid of claims 27-32, 36-38 or 42-46, comprising transfecting a cell with a nucleic acid of claims 27-32, 36-38 or 42-46 culturing the cell in conditions suitable for expression of the nucleic acid, and isolating the polypeptide from the cell or cell medium.

Remarks

Claims 1, 3-8, 21-32, 36-38 and 42-49 are currently under examination. Claims 1, 3, 21-26 and 47-49 have been canceled without prejudice. Claims 4-8, 27-32, 36-38 and 42-46 have been amended, and claims 50-53 have been added. Support for the claim amendments can be found throughout the specification and the amendment to claims as originally filed. In particular, support for the claims 4-8, 27-32, 36-38, 42-46 and 50-53 can be found, for example, at page 19, lines 7-18. No new matter has been added.

Claims 4, 27-32 and 42-46 were indicated as allowable if rewritten in independent form including all of the elements of the base and intervening claims. These claims have been rendered independent from rejected claims and are thus believed to be allowable.

Cancellation or amendments of claims should in no way be construed as an acquiescence to any of the Examiner's rejections. The cancellation or amendments to the claims are being made solely to expedite prosecution of the present application. Applicants reserve the option to further prosecute the same or similar claims in the instant or in a subsequent patent application.

Formal Drawings

In the Office Action Summary, the Examiner has indicated an objection to the drawings filed on July 19, 2001. The Applicants respectfully point out that formal drawings were submitted in this case with the response filed on June 16, 2003. Accordingly, reconsideration and withdrawal of this rejection is requested.

Objection to Claims 36-38

The Examiner has objected to claims 36-38 as being of improper dependent form. Following the Examiner's suggestion, the Applicants have herein amended claims 36-38 to be independent from claim 1. Accordingly, reconsideration and withdrawal of the objection to claims 36-38 is respectfully requested.

Rejection of Claims 1, 3, 5-8, 21-26 and 47-49 under 35 U.S.C. § 112, first paragraph (written description)

The Examiner has rejected claims 1, 3, 5-8, 21-26 and 47-49 under 35 U.S.C. § 112, first paragraph, allegedly because the specification does not describe the invention such that one skilled in the art, at the time the application was filed, had possession of the claimed invention. Applicants respectfully traverse this rejection.

Claims 1, 3, 21-26 and 47-49 have been canceled thereby rendering the rejection of these claims moot. The only other rejected claims, claims 5-8, have been amended to depend from claim 4, which claim was indicated by the Examiner as allowable if rewritten in independent form. Since claim 4 was rewritten in independent form, claims 5-8 should also be allowable. Furthermore, in many places the specification describes vectors comprising nucleic acids (for example, at pages 33-35, lines 12-32), cells comprising nucleic acids (for example, at page 15,

lines 20-23) and methods for producing a polypeptides by transfecting a cell with a nucleic acid (for example, at pages 33-38, line). Furthermore, the Applicants provide an example in which vectors containing the claimed nucleic acids are used to transfect cells that express polypeptides encoded by the claimed nucleic acids. (Example 3, pages 61-62). Thus, the Applicants reasonably convey to one skilled in the art that the inventors had possession of the claimed invention at the time the application was filed.

Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

Rejection of Claims 1, 3-8, 21-26 and 47-49 under 35 U.S.C. § 112, first paragraph (enablement)

The Examiner has rejected claims 1, 3-8, 21-26 and 47-49 under 35 U.S.C. § 112, first paragraph 1, allegedly because the specification does not describe the claimed invention in such a way as to enable one skilled in the are to make and/or use the invention. Applicants respectfully traverse this rejection.

Claims 1, 3, 21-26 and 47-49 have been canceled, thereby rendering the rejection of these claims moot. The only other rejected claims, claims 5-8, have been amended to depend from claim 4, which claim was indicated by the Examiner as allowable if rewritten in independent form. Since claim 4 was rewritten in independent form, claims 5-8 should also be allowable. Furthermore, in many places the specification describes how to make and use vectors comprising nucleic acids (for example, at pages 33-35, lines 12-32), cells comprising nucleic acids (for example, at page 15, lines 20-23) and methods for producing a polypeptides by transfecting a cell with a nucleic acid (for example, at pages 33-38, line). Thus, the Applicants have enabled one of skill in the are to make and/or use the invention.

Accordingly, the Applicants respectfully request reconsideration and withdrawal of this rejection.

Rejection of Claims 36-38 under 35 U.S.C. § 112, second paragraph

The Examiner has rejected claims 36-38 under 35 U.S.C. § 112, second paragraph, allegedly because the specification does not particularly point out and distinctly claim the subject matter which the applicant regards as the invention. Applicants respectfully traverse this rejection.

In particular, the Examiner states that “the claims are vague and indefinite because they are drawn to a nucleic acid encoding a polypeptide comprising SEQ ID No: 9, yet has a mutation at position 121” and that “ the nucleic adic encoding the mutant will not [comprise] the nucleic acid encoding SEQ ID No. 9.” Applicants respectfully submit that the claims have been amended to recite SEQ ID No. 30, which corresponds to SEQ ID No. 9 in which the histidine residue at position 121 has been replaced by a glutamine residue.

Accordingly, the Applicants respectfully request reconsideration and withdrawal of this rejection.

Rejection of Claims 1, 3, 5-7, 21, 22 and 26 under 35 U.S.C. § 102(a)

The Examiner has rejected claims 1, 3, 5-7, 21, 22 and 26 under 35 U.S.C. § 102(a). The Examiner has asserted that Han et al. (Sequence ID AF244136, GenEMB1, 2000 April 30) anticipates the claimed nucleic acids. Applicants respectfully traverse this rejection.

Claims 1, 3, 21-26 and 47-49 have been canceled, thereby rendering the rejection of these claims moot. Claims 5-7 have been amended, and as such depend only from claim 4, which was

not indicated as being anticipated by Han et al. In particular, the claim was indicated as being free of the cited prior art. Accordingly, the Applicants respectfully request reconsideration and withdrawal of this rejection.

Rejection of claim 8 under 35 U.S.C. § 103

The Examiner has rejected claim 8 under 35 U.S.C. § 103 as allegedly being unpatentable over Han et al. (supra) in view of Schilling et al. (Virology 247:74-85, 1998). The Applicants respectfully traverse this rejection.

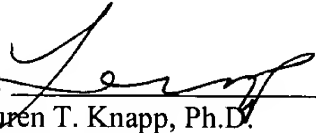
As amended, claim 8 now depends from claim 4, which the Examiner has stated is free of the cited prior art. Accordingly, the Applicants respectfully request reconsideration and withdrawal of this rejection.

Conclusion

In view of the above remarks and the amendments to the claims, it is believed that this application is in condition for allowance. If a telephone conversation with Applicant's Agent would expedite prosecution of the above-identified application, the Examiner is urged to call the undersigned at (617) 832-1000.

Respectfully submitted,

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Dated: January 9, 2004

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